

AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application.

LISTING OF CLAIMS

1-5. (canceled).

6. (currently amended) A doubly salient stator ~~for use in a~~ permanent magnet machine, the machine stator comprising:

a stator including a frame having an outer peripheral edge and an inner peripheral edge extending about a central axis; a plurality of stator teeth extending from the frame's inner peripheral edge toward the central axis; and a plurality of permanent magnets each located entirely within one of the stator teeth; ~~wherein~~ only every other one of the stator teeth ~~have~~ having one of the permanent magnets located therein; ~~and wherein~~ the permanent magnets in said every other one of the stator teeth ~~have~~ having inwardly facing north poles;

a rotor having no magnets located therein; and

a unipolar drive for driving rotation of the rotor relative to the stator with unipolar current.

7. (currently amended) The machine stator of claim 6 wherein the permanent magnets and the stator teeth each have a width extending in a direction of rotation of the a rotor when the rotor is mounted for rotation about the central axis, and wherein the widths of the permanent magnets are greater than the widths of the stator teeth.

8. (currently amended) The ~~A permanent magnet machine comprising the stator of claim 6 wherein and a rotor mounted for rotation about the central axis,~~ the rotor includes ~~including~~ a plurality of rotor teeth extending outwardly relative to the central axis.

9. (currently amended) The ~~permanent magnet~~ machine of claim 8 wherein the stator includes twelve stator teeth, and wherein the rotor includes eight rotor teeth.

10. (currently amended) A doubly salient stator ~~for use in a~~ permanent magnet machine, the machine stator comprising:

a stator including a frame having an outer peripheral edge and an inner peripheral edge extending about a central axis; a plurality of permanent magnets having inwardly facing north poles; a first plurality of stator teeth extending from the frame's inner peripheral edge toward the central axis, each of the first plurality of stator teeth having one of the permanent magnets located at least partly therein; and a second plurality of stator teeth extending from the frame's inner peripheral edge toward the central axis, the second plurality of stator teeth each having no permanent magnets located therein;

a rotor having no magnets located therein; and

a unipolar drive for driving rotation of the rotor relative to the stator with unipolar current.

11. (currently amended) The machine stator of claim 10 wherein the first plurality of stator teeth each have one of the permanent magnets located entirely therein.

12. (currently amended) The machine stator of claim 10 wherein the first plurality of stator teeth are each positioned directly between two of the second plurality of stator teeth.

13. (canceled).

14. (currently amended) The machine stator of claim 10 wherein the first plurality is equal in number to the second plurality.

15. (currently amended) The machine stator of claim 10 wherein the permanent magnets and the first plurality of stator teeth each have a width, and wherein the widths of the permanent magnets are greater than the widths of the first plurality of stator teeth.

16. (currently amended) The machine stator of claim 10 wherein each of the first plurality of stator teeth have a first profile, and wherein each of the second plurality of stator teeth have a second profile different than the first profile.

17. (currently amended) The machine stator of claim 16 wherein the first and second profiles each include end regions facing the central axis, and wherein the second profile's end regions taper inwardly towards said inner peripheral edge to a greater extent than the first profile's end regions.

18. (canceled)

19. (currently amended) A doubly salient stator for use in a permanent magnet machine, the machine stator comprising:

a stator including a frame having an outer peripheral edge and an inner peripheral edge extending about a central axis; a plurality of permanent magnets each having inwardly facing north poles; a first plurality of stator teeth extending from the stator frame's inner peripheral edge toward the central axis, each of the first plurality of stator teeth having one of the permanent magnets located entirely therein; and a second plurality of stator teeth extending from the frame's inner peripheral edge toward the central axis, the second plurality of stator teeth each having no permanent magnets located therein; ~~wherein~~ each of the first plurality of stator teeth ~~are each~~ positioned directly between two of the second plurality of stator teeth;

a rotor having no magnets located therein; and

a unipolar drive for driving rotation of the rotor relative to the stator with unipolar current.

20. (currently amended) The ~~A permanent magnet machine comprising the stator of claim 19 and a rotor mounted for rotation about the central axis,~~ wherein the stator includes twelve stator teeth, and wherein the rotor includes eight rotor teeth.

21. (currently amended) The machine stator of claim 10 wherein the first plurality of stator teeth are each positioned directly adjacent to another one of the first plurality of stator teeth.

22. (currently amended) The machine stator of claim 21 wherein three of the first plurality of stator teeth are positioned directly adjacent one another.